- 2 -

What is claimed is:

1. (currently amended) A direct heating tube adapted for chromatography which

directly heats a fluid during the passage of the fluid, wherein in a desired portion of the

tube to be heated, a second heated tube which is connected to a first heated tube is

provided outside the first heated tube.

2. (previously presented) The direct heating tube according to claim 1, wherein the

second heated tube is provided along a full length of the desired portion of the direct

heating tube to be heated.

3. (previously presented) The direct heating tube according to claim 1, wherein the

second heated tube is provided in both end portions of the desired portion of the direct

heating tube to be heated.

4. (previously presented) The direct heating tube according to claim 1, wherein the

second heated tube is provided in one end portion of the desired portion of the direct

heating tube to be heated.

5. (previously presented) The direct heating tube according to claim 1, wherein an

electrode portion is connected to the second heated tube.

6. (previously presented) The direct heating tube according to claim 5, wherein an

electrode portion is connected directly to the second heated tube.

7. (currently amended) The direct heating tube according to claim 1, wherein a

change in gradient is provided in a wall thickness of the first heated tube and/or the

second heated tube is provided along the length of the first and/or second heated tubes.

8. (previously presented) The direct heating tube according to claim 1, wherein the

direct heating tube is a column or a heat tube.

Atty Docket 114116.00031

9. (withdrawn, currently amended) A method of heating a fluid passing through a

- 3 -

tube adapted for chromatography, wherein in a desired portion of the tube to be heated,

by use of a direct heating tube which is constructed in such a manner that a second heated

tube connected to a first heated tube is provided outside the first heated tube, a fluid

passing through the tube is heated by connecting an electrode portion to the second

heated tube and heating the first heated tube.

10. (currently amended) The direct heating tube according to claim 5, wherein a

change in gradient is provided in a wall thickness of the first heated tube and/or the

second heated tube is provided along the length of the first and/or second heated tubes.

11. (previously presented) The direct heating tube according to claim 10, wherein the

direct heating tube is a column or a heat tube.

12. (previously presented) The direct heating tube according to claim 2, wherein the

direct heating tube is a column or a heat tube.

13. (cancelled)

14. (previously presented) The direct heating tube according to claim 4, wherein the

direct heating tube is a column or a heat tube.

15. (previously presented) The direct heating tube according to claim 5, wherein the

direct heating tube is a column or a heat tube.

16. (cancelled)

17. (previously presented) The direct heating tube according to claim 7, wherein the

direct heating tube is a column or a heat tube.

Ser. No. 10/597,953

Response and Amendment 072209

Atty Docket 114116.00031

18. (cancelled)

19. (previously presented) The direct heating tube according to claim 4, wherein an

- 4 -

electrode portion is connected to the second heated tube.

20. (previously presented) The direct heating tube according to claim 19, wherein the

direct heating tube is a column or a heat tube.

21. (currently amended) The direct heating tube according to claim 4, wherein a

change in gradient is provided in a wall thickness of the first heated tube, the second

heated tube, or both is provided along the length of the first and/or second heated tubes.

22. (new) The direct heating tube of claim 1, wherein the second heated tube

concentrically surrounds the first heated tube and is connected to the first heated tube by

a flange, such that the direct heating tube has a double tube configuration in the region of

the second heated tube.

23. (new) The direct heating tube of claim 1, wherein the second heated tube

concentrically surrounds the first heated tube, and establishes a void between the first and

second heated tubes.